LPDES PERMIT NO. LA0051942, AI No. 3116

LPDES FACT SHEET and RATIONALE
FOR THE DRAFT LOUISIANA POLLUTANT DISCHARGE ELIMINATION SYSTEM
(LPDES) PERMIT TO DISCHARGE TO WATERS OF LOUISIANA

I. **Company/Facility Name:** Alon USA
Alon Krotz Springs Refinery
Post Office Box 453
Krotz Springs, Louisiana 70750

II. **Issuing Office:** Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313

III. **Prepared By:** Jenniffer Sheppard
Industrial Permits Section
Water Permits Division
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Date Prepared: March 5, 2009

IV. **Permit Action/Status:**

A. Reason For Permit Action:

Proposed revocation and reissuance of an existing Louisiana Pollutant Discharge Elimination System (LPDES) permit for a 5-year term following regulations promulgated at LAC 33:IX.2711/40 CFR 122.46*.

LAC 33:IX Citations: Unless otherwise stated, citations to LAC 33:IX refer to promulgated regulations listed at Louisiana Administrative Code, Title 33, Part IX.

40 CFR Citations: Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations in accordance with the dates specified at LAC 33:IX.2301, 4901, and 4903.

B. NPDES permit - NPDES permit effective date: N/A
NPDES permit expiration date: N/A
EPA has not retained enforcement authority.

C. LPDES permit - LPDES permit effective date: December 1, 2005
LPDES permit expiration date: November 31, 2010

D. Application received on January 7, 2009. Additional information submittal dated May 12, 2009. E-mail correspondence received on June 24, 2009.

V. **Facility Information:**

A. Location - 356 South Levee Road, Highway 105 South in Krotz Springs

B. Applicant Activity -

According to the application, Alon USA, Alon Krotz Springs Refinery, is a petroleum refinery that produces marketable petroleum products such as gasoline, diesel, kerosene, jet fuel, liquefied petroleum gas, and ammonium thiosulfate fertilizer.

This petroleum refinery consists of the following units: a crude unit, a vacuum unit, a fluidized catalytic cracking unit (FCCU), a naphtha hydrotreater (NHT), a catalytic reformer unit, a polymerization unit (Poly), an octene unit (unit currently idle), an isomerization unit (Isom), an ammonium thiosulfate (ATS) unit, an MTBE Unit (MTBE Unit was idled in 2006. Part of the unit remains in operation as a C4/C5 splitter), and a gasoline desulfurization unit (GDU). The new light ends recovery unit (LRU) started up in October 2008. Support facilities include steam boilers, docks, truck and railcar loading/unloading facilities, a wastewater treatment plant, and storage tanks.

C. Technology Basis - (40 CFR Chapter 1, Subchapter N/Parts 401, 405-415, and 417-471 have been adopted by reference at LAC 33:IX.4903)

Guideline	Reference
Refinery Guidelines	40 CFR 419 Subpart B (NSPS)

Feedstock rate to Topping Unit(s), 1000 bbl/day: 84
Ballast water flow, 1000 bbl/day: 0

Process Unit Rates, 1000 bbl/day:

Crude Process	Process Rates, Kbbl/day:
Vacuum Distillation Unit	22
Crude Desalting Unit	84
Atmospheric Distillation Unit	84
Cracking and Coking	
Hydrotreating	10
Fluid Catalytic Cracking Unit	34
Fluid Catalytic Cracking Desalting Unit	34
Reforming and Alkylation Process	
Catalytic Reforming	10

Contaminated Stormwater/Groundwater:
Process Area SW: 2 GPM
Groundwater: 1 GPM

Other sources of technology based limits:
LDEQ Stormwater Guidance, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6).
Louisiana Water Quality Management Plan for Sanitary Dischargers.
LDEQ Sanitary General Permit, LAG530000.
LDEQ Hydrostatic Test General Permit, LAG670000.
Best Professional Judgment.

D. Fee Rate -
1. Fee Rating Facility Type: Major
2. Complexity Type: V
3. Wastewater Type: II
4. SIC code: 2911

E. Continuous Facility Effluent Flow - 0.77976 MGD.

VI. **Receiving Waters:** Atchafalaya River (Outfalls 002 and 004) and Bayou Courtableau (Outfalls 003, 005, and 006)

Bayou Courtableau (Outfalls 003, 005, and 006)
1. River Basin: Atchafalaya River, 010301
2. Designated Uses:
The designated uses are primary contact recreation, secondary contact recreation, and fish and wildlife propagation.

Atchafalaya River (Outfalls 002 and 004)
1. TSS (15%), mg/L: 42.0
2. Average Hardness, mg/L $CaCO_3$: 135.82
3. Critical Flow, cfs: 26,900
4. Mixing Zone Fraction: 0.33
5. Harmonic Mean Flow, cfs: 145,900
6. River Basin: Atchafalaya River, Segment No. 010201
7. Designated Uses:
The designated uses are primary contact recreation, secondary contact recreation, fish and wildlife propagation, and drinking water supply.

Information based on the following: LAC 33:IX Chapter 11. Hardness and 15% TSS data come from monitoring station 290 (Atchafalaya River at Krotz Springs, 11.4 miles southwest of Livonia, 20 miles east of Opelousas, and 14.8 miles northeast of Cecelia) and station 1196 (Atchafalaya River at Krotz Springs , at the gauging station at US 190). The critical flow was based on USGS station number 7381500 (Atchafalaya River at Krotz Springs) found in *Low-Flow on Streams in Louisiana*, prepared for the LDEQ , Office of Water Resources,

Engineering Section 2, by Fred N. Lee, March 2000. This information was presented in a memorandum from Todd Franklin to Jenniffer Sheppard, dated March 5, 2009 (See Appendix C).

VII. Outfall Information:

Outfall 002

A. Type of wastewater - the intermittent discharge of low contamination potential stormwater from the tank farms and non-process areas; uncontaminated firewater; and previously monitored hydrostatic test wastewater from Internal Outfall 007.

B. Location - at the point of discharge from the northern facility area (located east of Louisiana Highway 105), between the river levee and the Atchafalaya River, prior to combining with other waters, at Latitude 30°32'07", Longitude 91°44'48".

C. Treatment - None.

D. Flow - Intermittent, estimated flow of 0.00216 MGD.

E. Receiving waters - Atchafalaya River via unnamed drainage ditch.

F. Basin and segment - Atchafalaya River Basin, Segment 010201.

Outfall 003

A. Type of wastewater - the intermittent discharge of low contamination potential stormwater from the tank farms and non-process areas; run-on from off-site; post first-flush stormwater (stormwater after the first inch of precipitation) from production areas; uncontaminated firewater; steam condensate; and previously monitored hydrostatic test wastewater from Internal Outfall 007.

B. Location - at the point of discharge on the west side of the facility (just north of the FCC Unit) prior to combining with other waters, at Latitude 30°31'34", Longitude 91°45'06".

C. Treatment - None.

D. Flow - Intermittent, estimated flow of 0.00216 MGD.

E. Receiving waters - Bayou Courtableau drainage basin via an unnamed drainage ditch, thence to Bayou Courtableau.

F. Basin and segment - Atchafalaya River Basin, 010301.

Outfall 004

A. Type of wastewater - the continuous discharge of treated process wastewater and process area stormwater; treated washdown water; oily water; recovered groundwater; cooling tower blowdown; boiler feed backwash; hydrostatic test water; and treated sanitary wastewater.

B. Location - at the point of discharge from the treatment system, prior to commingling with any other waters, at Latitude 30°30'38", Longitude 91°45'05".

C. Treatment - treatment of process wastewaters consists of:
- equalization
- oil water separation
- flocculation
- flotation (DAF)
- activated sludge
- clarification
- sedimentation

D. Flow - Continuous Flow, 0.77976 MGD.

E. Receiving waters - Atchafalaya River via an effluent pipe.

F. Basin and segment - Atchafalaya River Basin, Segment 010201.

Outfall 005

A. Type of wastewater - the intermittent discharge of low contamination potential stormwater from tank farms and non-process areas; run-on from off-site; post first-flush stormwater (stormwater after the first inch of precipitation) from production areas; uncontaminated firewater; steam condensate; and previously monitored hydrostatic test wastewater from Internal Outfall 007.

B. Location - at the point of discharge northwest of the facility's Lay Down Yard, prior to commingling with other waters, at Latitude 30°30'22", Longitude 91°45'11".

C. Treatment - None.

D. Flow - Intermittent, estimated flow of 0.00216 MGD.

E. Receiving waters - Bayou Courtableau drainage basin via an unnamed drainage ditch, thence to Bayou Courtableau.

F. Basin and segment - Atchafalaya River Basin, Segment 010301.

Outfall 006

A. Type of wastewater - the intermittent discharge of low contamination potential stormwater from tank farms and non-process areas; run-on from off-site; post first-flush stormwater (stormwater after the first inch of precipitation) from production areas; uncontaminated firewater; steam condensate; and previously monitored hydrostatic test wastewater from Internal Outfall 007.

B. Location - at the point of discharge just south of Outfall 005, prior to commingling with offsite stormwater and other waters, at Latitude 30°31'16", Longitude 91°45'14".

C. Treatment - None.

D. Flow - Intermittent, estimated flow of 0.00216 MGD.

E. Receiving waters - Bayou Courtableau drainage basin via an unnamed drainage ditch, thence to Bayou Courtableau.

F. Basin and segment - Atchafalaya River Basin, Segment 010301.

VIII. Proposed Permit Limits:

The specific effluent limitations and/or conditions will be found in the draft permit. Development and calculation of permit limits are detailed in the Permit Limit Rationale section below.

Summary of Proposed Changes From the Current LPDES Permit:

A. Outfall 002 - Alon USA has requested a reduction in the monitoring frequencies for all parameters from 1/week to 1/month. Based on compliance history and in accordance with the requirements stated in the USEPA Memorandum "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies," the monitoring frequencies for Flow, TOC, Oil & Grease, and pH have been changed from 1/week to 1/month.

B. Outfalls 002, 003, and 005 - Hydrostatic test wastewaters have been moved under a new internal outfall (Outfall 007) in order to clarify permit monitoring requirements. Therefore TSS, Benzene, BTEX, and Lead have all been deleted as parameters at these outfalls and applied at Outfall 007.

C. Outfalls 003 and 005 - Alon USA has requested a reduction in the monitoring frequencies for all parameters from 2/week to 1/week. Based on compliance history and in accordance with the requirements stated in the USEPA Memorandum "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies," the

monitoring frequencies for Flow, TOC, Oil & Grease, and pH have been changed from 2/week to 1/week.

D. Outfalls 003, 005, and 006 - Alon USA requested inclusion of post first-flush stormwater from production areas at this outfall. Post first-flush is defined as stormwater after the first inch of precipitation. This request has been granted.

E. Outfall 004 - Alon USA has requested a reduction in the monitoring frequencies for BOD_5, COD, Oil & Grease, Ammonia, Sulfides, and Phenolics from 2/week to 2/month. Based on compliance history and in accordance with the requirements stated in the USEPA Memorandum "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies," this request was partially granted. Although Alon USA does qualify for consideration per EPA's guidance, the Department has determined that the allowable reductions are not appropriate for process discharges at a major facility. Therefore, the monitoring frequencies for BOD_5, COD, Oil & Grease, Ammonia, Sulfides, and Phenolics have been reduced from 2/week to 1/week. This is consistent with this Office's current guidance for frequency reductions.

F. Outfall 006 - newly created outfall to help with the draining of non-process areas near the southern portion of the facility. Until approval, this area will drain to Outfall 005. Since these wastewaters are identical to Outfall 005, the same limitations and monitoring frequencies established for Outfall 005 will be applied to this outfall based on best professional judgment.

G. Internal Outfall 007 - newly created outfall for hydrostatic test discharges. These discharges are covered individually at each outfall in the current LPDES permit effective on December 1, 2005. However, in an effort to clarify the monitoring and reporting requirements and to ensure consistency with monitoring for these types of discharges, LDEQ has determined that creation of a floating internal outfall is more appropriate. The floating outfall will allow the hydrostatic test discharges to be discharged through final Outfalls 002, 003, 005, and/or 006. Therefore, monitoring requirements have been established in accordance with the requirements in the Hydrostatic Test General Permit and will be applied based on best professional judgment.

IX. **Permit Limit Rationale:**

The following section sets forth the principal facts and the significant factual, legal, methodological, and policy questions considered in preparing the draft permit. Also set forth are any calculations or other explanations of the derivation of specific effluent limitations and conditions, including a citation to the applicable effluent limitation guideline or performance standard provisions as required under LAC 33:IX.2707/40 CFR Part 122.44 and reasons why they are applicable or an explanation of how the alternate effluent limitations were developed.

A. TECHNOLOGY-BASED VERSUS WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Following regulations promulgated at LAC 33:IX.2707.L.2.b/40 CFR Part 122.44(l)(2)(ii), the draft permit limits are based on either technology-based effluent limits pursuant to LAC 33:IX.2707.A/40 CFR Part 122.44(a) or on State water quality standards and requirements pursuant to LAC 33:IX.2707.D/40 CFR Part 122.44(d), whichever are more stringent.

B. TECHNOLOGY-BASED EFFLUENT LIMITATIONS, CONDITIONS, AND MONITORING REQUIREMENTS

Regulations promulgated at LAC 33:IX.2707.A/40 CFR Part 122.44(a) require technology-based effluent limitations to be placed in LPDES permits based on effluent limitations guidelines where applicable, on BPJ (best professional judgment) in the absence of guidelines, or on a combination of the two. The following is a rationale for types of wastewaters. See outfall information descriptions for associated outfall(s) in Section VII. Regulations also require permits to establish monitoring requirements to yield data representative of the monitored activity [LAC 33:IX.2715/40 CFR 122.48(b)] and to assure compliance with permit limitations [LAC 33:IX.2707.I./40 CFR 122.44(i)].

1. Outfall(s) 002, 003, 005, and 006 - Stormwater and Miscellaneous Utility Wastewaters.

*Outfall 002 - the intermittent discharge of low contamination potential stormwater from the tank farms and non-process areas; uncontaminated firewater; and previously monitored hydrostatic test wastewater from Internal Outfall 007.

Uncontaminated or low potential contaminated stormwater and miscellaneous utility wastewaters discharged through discrete outfall(s) shall receive the following BPJ limitations in accordance with this Office's guidance on stormwater, letter dated 6/17/87,

from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6) and best professional judgment.

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Flow, MGD	Report	Report	---	---	1/month
TOC	---	---	---	50	1/month
Oil & Grease	---	---	---	15	1/month
pH Standard Units	---	---	6.0 (min)	9.0 (max)	1/month

Site-Specific Consideration(s) for Outfall 002

Flow - this requirement has been established in accordance with LAC 33:IX.2707.I.1.b. and retained from the current LPDES permit effective on December 1, 2005. Alon USA has requested a reduction in the monitoring frequency from 1/week to 1/month. This request has been granted based on best professional judgment due to overall compliance history at the outfall and the 1/month monitoring frequency established for all other parameters.

TOC and Oil & Grease - daily maximum limitations of 50 mg/L for TOC and 15 mg/L for Oil & Grease have been retained from the current LPDES permit effective on December 1, 2005. These limitations have been established based on best professional judgment and are consistent with this Office's guidance on stormwater as referenced in letter dated June 17, 1987, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6). Alon USA has requested a reduction in the monitoring frequencies from 1/week to 1/month. Based on compliance history and in accordance with the requirements stated in the USEPA Memorandum "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies," the monitoring frequencies for TOC and Oil & Grease have been changed from 1/week to 1/month.

pH - this requirement has been established in accordance with LAC 33:IX.1113.C.1. and retained from the current LPDES permit effective on December 1, 2005. Alon USA has requested a reduction in the monitoring frequency from 1/week to 1/month. This request has been granted based on best professional judgment due to overall compliance history at the outfall and the 1/month monitoring frequency established for all other parameters.

*Outfalls 003 and 005 - the intermittent discharge of low contamination potential stormwater from the tank farms and non-process areas; run-on from off-site; post first-flush stormwater (stormwater after the first inch of precipitation) from production areas; uncontaminated firewater; steam condensate; and previously monitored hydrostatic test wastewater from Internal Outfall 007.

Uncontaminated or low potential contaminated stormwater and miscellaneous utility wastewaters discharged through discrete outfall(s) shall receive the following BPJ limitations in accordance with this Office's guidance on stormwater, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6) and best professional judgment.

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Flow, MGD	Report	Report	---	---	1/week
TOC	---	---	---	50	1/week
Oil & Grease	---	---	---	15	1/week
pH Standard Units	---	---	6.0 (min)	9.0 (max)	1/week

Site-Specific Consideration(s) for Outfall 003 and 005

Flow - this requirement has been established in accordance with LAC 33:IX.2707.I.1.b. and retained from the current LPDES permit effective on December 1, 2005. Alon USA has requested a reduction in the monitoring frequency from 2/week to 1/week. This request has been granted based on best professional judgment due to overall compliance history at the outfall and the 1/week monitoring frequency established for all other parameters.

TOC and Oil & Grease - daily maximum limitations of 50 mg/L for TOC and 15 mg/L for Oil & Grease have been retained from the current LPDES permit effective on December 1, 2005. These limitations have been established based on best professional judgment and are consistent with this Office's guidance on stormwater as referenced in letter dated June 17, 1987, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6). Alon USA has requested a reduction in the monitoring frequencies from 2/week to 1/week. Based on compliance history and in accordance with the requirements stated in the USEPA Memorandum "Interim Guidance for Performance Based Reductions of

NPDES Permit Monitoring Frequencies," the monitoring frequencies for TOC and Oil & Grease have been changed from 2/week to 1/week.

pH - this requirement has been established in accordance with LAC 33:IX.1113.C.1. and retained from the current LPDES permit effective on December 1, 2005. Alon USA has requested a reduction in the monitoring frequency from 2/week to 1/week. This request has been granted based on best professional judgment due to overall compliance history at the outfall and the 1/week monitoring frequency established for all other parameters.

*Outfall 006 - the intermittent discharge of low contamination potential stormwater from tank farms and non-process areas; run-on from off-site; post first-flush stormwater (stormwater after the first inch of precipitation) from production areas; uncontaminated firewater; steam condensate; and previously monitored hydrostatic test wastewater from Internal Outfall 007.

Uncontaminated or low potential contaminated stormwater and miscellaneous utility wastewaters discharged through discrete outfall(s) shall receive the following BPJ limitations in accordance with this Office's guidance on stormwater, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6) and best professional judgment.

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Flow, MGD	Report	Report	---	---	1/week
TOC	---	---	---	50	1/week
Oil & Grease	---	---	---	15	1/week
pH Standard Units	---	---	6.0 (min)	9.0 (max)	1/week

Site-Specific Consideration(s) for Outfall 006

Newly created outfall to help with the draining of non-process areas near the southern portion of the facility. Until approval, this area will drain to Outfall 005. Since these wastewaters are identical to Outfall 005, the same limitations and monitoring requirements established for Outfall 005 were established at this outfall.

Flow - this requirement has been established in accordance with LAC 33:IX.2707.I.1.b. The 1/week monitoring frequency has been established based on best professional judgment.

TOC and Oil & Grease - daily maximum limitations of 50 mg/L for TOC and 15 mg/L for Oil & Grease have been established based on best professional judgment and are consistent with this Office's guidance on stormwater as referenced in letter dated June 17, 1987, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6). The 1/week monitoring frequency for these parameters has also been established based on best professional judgment.

pH - this requirement has been established in accordance with LAC 33:IX.1113.C.1. The 1/week monitoring frequency has been established based on best professional judgment.

Additional Requirements Applicable to All Stormwater at the Facility

In accordance with LAC 33:IX.2707.I.3 and 4 [40 CFR 122.44(I)(3) and (4)], a Part II condition is proposed for applicability to all storm water discharges from the facility, either through permitted outfalls or through outfalls which are not listed in the permit or as sheet flow. **For first time permit issuance**, the Part II condition requires a Storm Water Pollution Prevention Plan (SWP3) within six (6) months of the effective date of the final permit. **For renewal permit issuance**, the Part II condition requires that the Storm Water Pollution Prevention Plan (SWP3) be reviewed and updated, if necessary, within six (6) months of the effective date of the final permit. If the permittee maintains other plans that contain duplicative information, those plans could be incorporated by reference to the SWP3. Examples of these type plans include, but are not limited to: Spill Prevention Control and Countermeasures Plan (SPCC), Best Management Plan (BMP), Response Plans, etc. The conditions will be found in the draft permit. Including Best Management Practice (BMP) controls in the form of a SWP3 is consistent with other LPDES and EPA permits regulating similar discharges of stormwater associated with industrial activity, as defined in LAC 33:IX.2522.B.14 [40 CFR 122.26(b)(14)].

2. Outfall 004 - Process Wastewaters and Process Area Stormwater, Utility Wastewaters, and Sanitary Wastewaters.

*Outfall 004 - the continuous discharge of treated process wastewater and process area stormwater; treated washdown water; oily water; recovered groundwater; cooling tower blowdown; boiler feed backwash; hydrostatic test water; and treated sanitary wastewater.

Alon USA, Alon Krotz Springs Refinery is subject to the standards of performance for new sources (NSPS) effluent limitation guidelines listed below:

Guideline	Reference
Refinery Guidelines	40 CFR 419 Subpart B (NSPS)

Feedstock rate to Topping Unit(s), 1000 bbl/day: 84
Ballast water flow, 1000 bbl/day: 0

Process Unit Rates, 1000 bbl/day:

Crude Process	Process Rates, Kbbl/day:
Vacuum Distillation Unit	22
Crude Desalting Unit	84
Atmospheric Distillation Unit	84
Cracking and Coking	
Hydrotreating	10
Fluid Catalytic Cracking Unit	34
Fluid Catalytic Cracking Desalting Unit	34
Reforming and Alkylation Process	
Catalytic Reforming	10

Contaminated Stormwater/Groundwater:
Process Area SW: 2 GPM
Groundwater: 1 GPM

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Flow, MGD	Report	Report	---	---	Continuous
pH Range Excursions No. of Events >60 minutes	---	---	---	0 (*1)	Continuous
pH Range Excursions Monthly Total Accumulated Time in Minutes	---	---	---	446 (*1)	Continuous
pH (Standard Units)	---	---	Report (*1) (Min)	Report (*1) (Max)	Continuous
BOD_5	380	710	---	---	1/week
TSS	306	490	---	---	2/week
Oil & Grease	114	208	---	---	1/week
COD	2571	5082	---	---	1/week
Ammonia (as N)	367	808	---	---	1/week
Sulfide (as S)	2.08	4.53	---	---	1/week
Phenolic Compounds	2.45	5.14	---	---	1/week
Fecal Coliform colonies/100 ml	---	---	200	400	1/month
Total Chromium	6.00	10.29	---	---	1/month
Chromium (6+)	0.39	0.88	---	---	1/month

(*1) The pH shall be within a range of 6.0 - 9.0 Standard Units at all times subject to the continuous monitoring pH range excursion provision in Part II, Paragraph H of the draft permit.

Calculations and basis of permit limitations are found at Appendix A-1 and associated appendices. See below for site-specific considerations.

Site-Specific Consideration(s) for Outfall 004

Flow - this requirement has been established in accordance with LAC 33:IX.2707.I.1.b. and retained from the current LPDES permit effective on December 1, 2005. The continuous monitoring frequency has also been retained.

pH - these limitations have been retained from the current LPDES permit, effective on December 1, 2005 and are established in accordance with LAC 33:IX.1113.C.1. The continuous monitoring frequency has also been retained.

TSS - monthly average and daily maximum limitations have been established in accordance with the Refinery Guidelines at 40 CFR 419, based on a production rate of 84 K bbl/day. The 2/week monitoring frequency has been retained from the current LPDES permit, effective on December 1, 2005.

BOD_5, Oil & Grease, COD, Ammonia (as N), Sulfide (as S), and Phenolic Compounds - monthly average and daily maximum limitations have been established in accordance with the Refinery Guidelines at 40 CFR 419, based on a production rate of 84 K bbl/day. Alon USA has requested a reduction in the measurement frequencies for BOD_5, Oil & Grease, COD, Ammonia, Sulfides, and Phenolics from 2/week to 2/month. Based on compliance history and in accordance with the requirements stated in the USEPA Memorandum "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies," this request was partially granted. Although Alon USA does qualify for consideration per EPA's guidance, the Department has determined that the allowable reductions are not appropriate for process discharges at a major facility. Therefore, the measurement frequencies for BOD_5, Oil & Grease, COD, Ammonia, Sulfides, and Phenolics have been reduced from 2/week to 1/week. This is consistent with this Office's current guidance for frequency reductions.

Fecal Coliform - the 200 colonies/100 ml monthly average and 400 colonies/100 ml daily maximum limitations have been retained from the current LPDES permit, effective on December 1, 2005. These limitations are consistent with the requirements established in Schedule B of the Sanitary General Permit for flows less than 5,000 GPD, LAG530000. The monitoring frequency of 1/month has been retained from the current LPDES permit, effective on December 1, 2005.

Total Chromium and Chromium (6+) - monthly average and daily maximum limitations have been established in accordance with the Refinery Guidelines at 40 CFR 419, based on a production rate of 84 K

bbl/day. The 1/month monitoring frequencies have been retained from the current LPDES permit, effective on December 1, 2005.

3. Internal Outfall 007 - Hydrostatic Test Waters

*Internal Outfall 007 - the intermittent discharge of hydrostatic test water.

PARAMETER(S) (*1)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Flow, MGD	Report	Report	---	---	1/discharge
TOC	---	---	---	50	1/discharge
Oil & Grease	---	---	---	15	1/discharge
TSS	---	---	---	90	1/discharge
Benzene	---	---	---	50 µg/L	1/discharge
Total BTEX	---	---	---	250 µg/L	1/discharge
Total Lead	---	---	---	50 µg/L	1/discharge
pH Standard Units	---	---	6.0 (min)	9.0 (max)	1/discharge

(*1) Flow, TSS, Oil and Grease, and pH shall be measured on discharges from all new and existing pipelines, flowlines, vessels, or tanks. In addition, Total Organic Carbon (TOC) shall be measured on discharges from existing pipelines, flowlines, vessels, or tanks which have previously been in service; (i.e., those which are not new). Benzene, Total BTEX, and Total Lead shall be measured on discharges from existing pipelines, flowlines, vessels, or tanks which have been used for the storage or transportation of liquid or gaseous petroleum hydrocarbons.

<u>Site-Specific Consideration(s) for Internal Outfall 007</u>

The wastewaters from this internal outfall may be discharged through final Outfalls 002, 003, 005, and/or 006.

Flow - this requirement has been established in accordance with LAC 33:IX.2707.I.1.b. with a monitoring frequency of 1/discharge. These requirements are consistent with the requirements established in the LPDES General Permit for Hydrostatic Test Wastewater, LAG670000 and have been applied based on best professional judgment.

Total Organic Carbon (TOC) - a daily maximum limitation of 50 mg/L has been established with a monitoring frequency of 1/discharge. These requirements are consistent with the requirements established in the LPDES General Permit for Hydrostatic Test Wastewater, LAG670000 and have been applied based on best professional judgment.

Oil & Grease - a daily maximum limitation of 15 mg/L has been established with a monitoring frequency of 1/discharge. These requirements are consistent with the requirements established in the LPDES General Permit for Hydrostatic Test Wastewater, LAG670000 and have been applied based on best professional judgment.

TSS - a daily maximum limitation of 90 mg/L has been established with a monitoring frequency of 1/discharge. These requirements are consistent with the requirements established in the LPDES General Permit for Hydrostatic Test Wastewater, LAG670000 and have been applied based on best professional judgment.

Benzene, Total BTEX, and Lead - daily maximum limitations of 50 µg/L for Benzene, 250 µg/L for Total BTEX, and 50 µg/L for Lead have been established with monitoring frequencies of 1/discharge. These requirements are consistent with the requirements established in the LPDES General Permit for Hydrostatic Test Wastewater, LAG670000 and have been applied based on best professional judgment.

C. WATER QUALITY-BASED EFFLUENT LIMITATIONS

Technology-based effluent limitations and/or specific analytical results from the permittee's application were screened against state water quality numerical standard based limits by following guidance procedures established in the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, April 16, 2008. Calculations, results, and documentation are given in Appendix B.

In accordance with LAC 33:IX.2707.D.1/40 CFR § 122.44(d)(1), the existing (or potential) discharge (s) was evaluated in accordance with the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, April 16, 2008, to determine whether pollutants would be discharged "at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard." Calculations, results, and documentation are given in Appendix B.

The following pollutants received water quality based effluent limits:

POLLUTANT(S)
None

Minimum quantification levels (MQL's) for state water quality numerical standards-based effluent limitations are set at the values listed in the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, April 16, 2008. They are also listed in Part II of the permit.

TMDL Waterbodies

Outfalls 002 and 004

The discharges include low contamination potential stormwater from the tank farms and non-process areas; uncontaminated firewater; and previously monitored hydrostatic test wastewater from Internal Outfall 007 (Outfall 002) are to the Atchafalaya River via an unnamed drainage ditch, and treated process wastewater and process area stormwater; treated washdown water; oily water; recovered groundwater; cooling tower blowdown; boiler feed backwash; hydrostatic test water; and treated sanitary wastewater (Outfall 004) are to the Atchafalaya River via an effluent pipe, Segment No. 010201. The Atchafalaya River is not listed on the 303(d) report as being impaired. Therefore, no additional requirements have been added at these outfalls.

Outfall 003, 005, and 006

The discharges from Outfalls 003, 005, and 006 include low contamination potential stormwater from the tank farms and non-process areas; run-on from off-site; post first-flush stormwater (stormwater after the first inch of precipitation) from production areas; uncontaminated firewater; steam condensate; and previously monitored hydrostatic test wastewater from Internal Outfall 007 are to the Bayou Courtableau drainage basin via an unnamed drainage ditch, thence to Bayou Courtableau, Segment No. 010301 (West Atchafalaya Basin Floodway - Simmesport to Butte LaRose Bay and Henderson Lake). Bayou Courtableau is listed on the 303(d) report as being impaired with mercury and organic enrichment/low DO. A TMDL is scheduled to be completed by March 2010.

Total Mercury

The minimum quantification level (MQL) listed in Part II.I of the permit is 0.2 µg/L for Total Mercury. In accordance with the analytical results for Outfalls 003 and 005 submitted in the March 12, 2009 additional information document, Total Mercury was present at levels below the respective MQL. Due to Outfall 006 being a proposed outfall, no analytical results were submitted. Since this outfall will contain wastewaters that are currently routed to Outfall 005, the Outfall 005 samples are considered representative. LDEQ has determined that Total Mercury is not reasonably expected to cause or contribute to further impairments in Bayou Courtableau. Therefore, reporting requirements were not established for this parameter at these outfalls.

Organic Enrichment/Low DO

The types of wastewaters permitted to discharge from Outfalls 003, 005, and 006 do not have a history of causing or contributing to ambient DO and nutrient impairments. DO and nutrient impairments are typically attributed to improperly operated on-site domestic wastewater treatment systems, decentralized wastewater treatment, fill/drainage, crop production and unsewered residential districts. Additionally, no LDEQ finalized TMDL recognizes non-process waste streams, such as those consisting of stormwater and utility wastewater, as point source contributors to DO and nutrient impairments where TMDLs have been established for these impairments.

However, in an effort to address the impairments during the development of the draft permit, TOC monitoring has been identified as a means of measuring organic materials in a discharge. Given the types of discharges and the suspected cause of the impairments, this Office has determined that it is appropriate to retain the 50 mg/L daily maximum limitation for TOC on these outfalls as an indicator parameter to monitor the organic constituents in the waste stream. The TOC limitation was originally established using stormwater guidance, in a letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6) and has been used in water discharge permits for similar types of discharges for 20 years and considered protective of waters of the state.

Site-Specific Consideration(s) for TMDL Discussion

None

D. Biomonitoring Requirements

It has been determined that there may be pollutants present in the effluent which may have the potential to cause toxic conditions in the receiving stream. The State of Louisiana has established a narrative criteria which states, "toxic substances shall not be present in quantities that alone or in combination will be toxic to plant or animal life." The Office of Environmental Services requires the use of the most recent EPA biomonitoring protocols.

Whole effluent biomonitoring is the most direct measure of potential toxicity which incorporates both the effects of synergism of effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity. The biomonitoring procedures stipulated as a condition of this permit for Outfall(s) 004 are as follows:

TOXICITY TESTS	FREQUENCY
Acute static renewal 48-hour definitive toxicity test using Daphnia pulex	1/year
Acute static renewal 48-hour definitive toxicity test using fathead minnow (Pimephales promelas)	1/year

Toxicity tests shall be performed in accordance with protocols described in the latest revision of the "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms." The stipulated test species are appropriate to measure the toxicity of the effluent consistent with the requirements of the State water quality standards. The biomonitoring frequency has been established to reflect the likelihood of ambient toxicity and to provide data representative of the toxic potential of the facility's discharge in accordance with regulations promulgated at LAC 33:IX.2715/40 CFR Part 122.48.

Results of all dilutions as well as the associated chemical monitoring of pH, temperature, hardness, dissolved oxygen, conductivity, and alkalinity shall be documented in a full report according to the test method publication mentioned in the previous paragraph. The permittee shall submit a copy of the first full report to the Office of Environmental Compliance. The full report and subsequent reports are to be retained for three (3) years following the provisions of Part III.C.3 of this permit. The permit

requires the submission of certain toxicity testing information as an attachment to the Discharge Monitoring Report.

This permit may be reopened to require effluent limits, additional testing, and/or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body. Modification or revocation of the permit is subject to the provisions of LAC 33:IX.3105/40 CFR 124.5. Accelerated or intensified toxicity testing may be required in accordance with Section 308 of the Clean Water Act.

Dilution Series

The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional effluent concentrations shall be 0.057%, 0.076%, 0.10%, 0.13%, and 0.18%. The low-flow effluent concentration (critical dilution) is defined as 0.13% effluent.

X. **Compliance History/DMR Review:**

A compliance review was completed for this facility covering the period of June 2007 to June 2009. The items for consideration include facility inspections, DMRs, and Open Enforcement Actions.

A. Inspection

A Compliance Evaluation Inspection was performed on October 1, 2008. The inspector noted the following items:

1. From 6/1/07 through 9/30/08, four spills were noted at the facility (<1 gallon diesel, <1 tablespoon light cycle oil, three gallons of crude oil, and one barrel of crude oil).
2. On 10/12/07, the effluent flow meter on Outfall 004 malfunctioned, resulting in no flow recordings for approximately seven hours.
3. The monthly DMRs were reviewed for a time frame of 6/1/07 through 6/30/08. During this time frame , the hydrostatic test water exceeded the daily maximum limits one time each for BTEX, Benzene, and Lead.

B. DMRs

The following excursions were reported by the facility:

DATE	PARAMETER	OUTFALL	REPORTED VALUE		PERMIT LIMITS	
			MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM
11/30/07	BTEX	003	---	1089 µg/L	---	250 µg/L
11/30/07	Benzene	003	---	598 µg/L	---	50 µg/L
11/30/09	Total Lead	003	---	151 µg/L	---	50 µg/L

C. Enforcement Actions (all open actions):

1. Water - None

2. Air - None

3. Solid/Hazardous Waste - None

4. Radiation - None

XI. "IT" Questions

The "IT" Questions along with the applicant's responses can be found in the additional information submittal dated May 12, 2009. This document can be viewed in EDMS, Document ID 41325915 using the following link:

http://edms.deq.louisiana.gov/app/doc/view.aspx?doc=41325915

XII. **Endangered Species:**

The receiving waterbody, Subsegment 010201 (Outfall 002 and 004) of the Atchafalaya River Basin, has been identified by the U.S. Fish and Wildlife Service (FWS) as habitat for the Pallid Sturgeon, which is listed as threatened and/or endangered species. This draft permit has been submitted to the FWS for review in accordance with a letter dated 11/17/08 from Rieck (FWS) to Nolan (LDEQ). As set forth in the Memorandum of Understanding between the LDEQ and the FWS, and after consultation with FWS, LDEQ has determined that the issuance of the LPDES permit is not likely to have an adverse effect upon the Pallid Sturgeon. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat. Therefore, the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat.

The receiving waterbody, Subsegment 010301 (Outfalls 003, 005, and 006) of the Atchafalaya River Basin, has not been identified by the U.S. Fish and Wildlife Service (FWS) as habitat for any threatened and/or endangered species.

XIII. Historic Sites:

The discharge is from an existing facility location, which does not include an expansion on undisturbed soils. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the "Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits" no consultation with the Louisiana State Historic Preservation Officer is required.

XIV. Tentative Determination:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to reissue a permit for the discharge described in the application.

XV. Variances:

No requests for variances have been received by this Office.

XVI. Public Notices:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the fact sheet. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List